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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/847,399	05/03/2001	Hideaki Emoto	2001-0455A	6482

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EXAMINER

PERILLA, JASON M

ART UNIT PAPER NUMBER

2634

4

DATE MAILED: 06/30/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/847,399

Applicant(s)

EMOTO ET AL.

Examiner

Jason M Perilla

Art Unit

2634

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 May 2001.
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1-8 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on 03 May 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 2-5/04 3-5/01.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. Claims 1-8 are pending in the instant application.

Information Disclosure Statement

2. The information disclosure statements (IDS) are in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statements are being considered by the examiner.

Specification

3. The Examiner notes to the Applicant the word "laid" in the forth paragraph of the detailed description of the preferred embodiments on page 3 of the specification. The Examiner suggests that the word "laid" was intended to be the achronymn –RAID--.

Claim Objections

4. Claims 4-6 are objected to. The claims should be amended so as to be related to a method or an apparatus.

Claim Rejections - 35 USC § 102

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1, 4, and 7 are rejected under 35 U.S.C. 102(b) as being anticipated by York (US 5680400 – *IDS reference AA*).

Regarding claim 1, York discloses by figure 1 a distributed communication device for transmitting data stored in a device located a place (104) to another device located at a different place (122), wherein at least three communicating lines are utilized (113A-N), said data is divided into at least three parts and transmitted through each said communicating lines, respectively (col. 2, lines 56-60).

Regarding claim 4, York discloses by figure 1 distributed communication data transmitted through at least three communicating lines (113A-N) between a device located at a place (102) and another device located at a different place (122), wherein said distributed communication data is divided and transmitted through the respective communicating line (col. 2, lines 56-60).

Regarding claim 7, York discloses by figure 1 a distributed transmitting means for transmitting data (102) stored in a transmitting device through at least three communicating lines (113A-N), wherein said data is divided and transmitted through the respective communicating lines to a target point (122).

Regarding claim 8, York discloses by figure 1 a distributed receiving means (118) for receiving data through at least three communicating lines (113A-N), wherein said data is divided into a plurality of parts and individually transmitted and said data is reproduced by receiving divided parts of said data (col. 2, lines 56-60).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims are rejected under 35 U.S.C. 103(a) as being unpatentable over York in view of Shamir (Shamir, Adi; "How to Share a Secret" – *IDS reference AP*).

Regarding claim 2, York discloses the limitations of claim 1 as applied above. York discloses that said data is divided into a plurality of parts, but does not disclose

that said data is transmitted with combinations of some said parts so as to be recovered even if one of said parts is destroyed. In fact, York discloses a disadvantage to his invention being that it is necessary to produce an error if the data can not be transmitted (col. 5, lines 19-22). This is because the data is divided and transmitted separately over the communications lines so that if any one of the communications channels fails, the data on that channel would be lost. However, Shamir teaches a method to be used in a device of transmitting over multiple channels wherein the data is divided into multiple parts and transmitted as groups of combinations of the parts (pg. 12, col. 2, lines 1-10). In this case, if one of the parts is lost due to a failure of one channel, the received signals from the remaining channels can be utilized to recreate the original transmission in its entirety (Section I, "Introduction"). Because the method of Shamir would beneficially provide redundancy and a type of "encryption" to the transmission device of York, it would have been obvious to one having ordinary skill in the art at the time which the invention was made to combine the teachings of Shamir with the communications device of York. Thereby, each of the plurality of communications channels of York would transmit a combination of the divided plurality of data parts.

Regarding claim 3, York discloses the limitations of claim 1 as applied above. York discloses that said data is divided into a plurality of parts, but does not disclose that said data is transmitted with combinations of some said parts so as to be recovered even if one of said parts is destroyed. In fact, York discloses a disadvantage to his invention being that it is necessary to produce an error if the data can not be transmitted (col. 5, lines 19-22). This is because the data is divided and transmitted separately over

the communications lines so that if any one of the communications channels fails, the data on that channel would be lost. However, Shamir teaches a method to be used in a device of transmitting over multiple channels wherein the data is divided into multiple parts and transmitted as groups of combinations of the parts (pg. 12, col. 2, lines 1-10). In this case, if one of the parts is lost due to a failure of one channel, the received signals from the remaining channels can be utilized to recreate the original transmission in its entirety (Section I, "Introduction"). Because the method of Shamir would beneficially provide redundancy and a type of "encryption" to the transmission device of York, it would have been obvious to one having ordinary skill in the art at the time which the invention was made to combine the teachings of Shamir with the communications device of York. Thereby, each of the plurality of communications channels of York would transmit a combination of the divided plurality of data parts. Further, Shamir discloses that, by the use of the method described, the original data in its entirety could not be completely reproduced unless a number of received parts is equal or more than a total divided number minus 1 (pg. 12, col. 2, lines 6-9).

Regarding claim 5, York discloses by figure 1 distributed communicating data transmitted through at least three communicating lines (113A-N) between a device located at a place (104) and another device located at a different place (122), wherein said distributed communication data is divided into at least three portions and transmitted over the at least three communicating lines (col. 2, lines 56-60). York does not disclose that the divided data portions are transmitted with combinations of optional number of said portions, respectively so as to recover said distributed communication

data even if a part of distributed communication data is destroyed. However, Shamir teaches a method to be used in a device of transmitting over multiple channels wherein the data is divided into multiple parts and transmitted as groups of combinations of the parts (pg. 12, col. 2, lines 1-10). In this case, if one of the parts is lost due to a failure of one channel, the received signals from the remaining channels can be utilized to recreate the original transmission in its entirety (Section I, "Introduction"). Because the method of Shamir would beneficially provide redundancy and a type of "encryption" to the transmission device of York, it would have been obvious to one having ordinary skill in the art at the time which the invention was made to combine the teachings of Shamir with the communications device of York. Thereby, each of the plurality of communications channels of York would transmit a combination of the divided plurality of data parts.

Regarding claim 6, York discloses by figure 1 distributed communicating data transmitted through at least three communicating lines (113A-N) between a device located at a place (104) and another device located at a different place (122), wherein said distributed communication data is divided into a plurality of parts corresponding to said communicating lines (col. 2, lines 56-60). York does not disclose that the divided data portions are transmitted with combinations of optional number of said portions so that said data can not be analyzed unless a number of received parts is equal or more than a total divided number minus 1. However, Shamir teaches a method to be used in a device of transmitting over multiple channels wherein the data is divided into multiple parts and transmitted as groups of combinations of the parts (pg. 12, col. 2, lines 1-10).

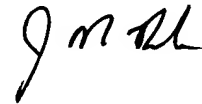
In this case, if one of the parts is lost due to a failure of one channel, the received signals from the remaining channels can be utilized to recreate the original transmission in its entirety (Section I, "Introduction"). Because the method of Shamir would beneficially provide redundancy and a type of "encryption" to the transmission device of York, it would have been obvious to one having ordinary skill in the art at the time which the invention was made to combine the teachings of Shamir with the communications device of York. Thereby, each of the plurality of communications channels of York would transmit a combination of the divided plurality of data parts. Further, Shamir discloses that, by the use of the method described, the original data in its entirety could not be completely reproduced unless a number of received parts is equal or more than a total divided number minus 1 (pg. 12, col. 2, lines 6-9).

Conclusion

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jason M Perilla whose telephone number is (703) 305-0374. The examiner can normally be reached on M-F 8-5 EST.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven Chin can be reached on (703) 305-4714. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Jason M. Perilla
June 21, 2004

jmp



STEPHEN CHIN
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